VSP 1314

User Manual

- Manual #：RGB-RD-UM-V1314 E001
- Revision:V1.2

VSP 1314·User Manual

Thank you for choosing our products! In order to allow you to learn how to use the video processor quickly, we bring you the detailed user's guide. You can read the introduction and directions before using the video processor, please read all the information we provide carefully to use our products correctly.

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This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the user will be responsible for correcting any interference.

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Operators Safety Summary

The general safety information in this summary is for operating personnel.

Do Not Remove Covers or Panels

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

Power Source

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

Terms In This Manual and Equipment Marking

WARNING

Highlights an operating procedure, practice, condition, statement, etc., which, if not strictly observed, could result in injury to or death of personnel.

Note

Highlights an essential operating procedure, condition or statement.

CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Change History

The table below lists the changes to the Video Processor User Manual.

Format	Time	ECO#	Description	Principal
V1.0	2012-10-12	0000	Release	BIN
V1.1	2013-01-07	0001	Button modify： Change to Change to	BIN
V1.2	2013-03-04	0002	Cancel scale height limit setting, refer to page 52 for more details.	Vira

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1. Introduction

This chapter is designed to introduce you to the VSP 1314 User Manual.

Areas to be covered are:

- Chapter Structure
- How to use this manual
- Tems and Definitions
- System Overview
- Application Questions

Chapter Structure

The following chapters provide instructions for all aspects of VSP1314 operations.

Chapter 1 Introduction

Chapter 2 Hardware Orientation

Chapter 3 Hardware Installation

Chapter 4 Menu Orientation

Chapter 5 System Setup and Opetations

Appendix A Specification

Appendix B Contact information

Appendix C Firmware Upgrade

How to Use This Manual

Following are important tips for streamlining your use of this User Manual in its electronic “PDF” form.

Navigating

Use Acrobat Reader’s －bookmarks to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:

- Extensive hyperlinks are provided within the chapters.
- Use Acrobat’s “Go to Previous View” and “Return to next View” buttons to trace your complete navigational path.

- Use the “Previous Page” and “Next Page” buttons to go to be previous or next page within a file.
- Use Acrobat’s extensive search capabilities, such as the “Find” tool and “Search Index” tool to perform comprehensive searches as required.

Table of Contents and Index

Use the Table of Contents bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. You can also use the Index to jump to specific topics within a chapter. Each page number in the Index is a hyperlink.

General Operations

To ensure trouble-free operation, please follow all procedures as listed below:

- For detailed installation instructions, refer to chapter 3 “Hardware Installation” on page34.
- For communication software control guide, refer to Chapter 5, “Communication Software Control Guide” on page 45.

Should you have any questions regarding the installation or operation of VSP 1314, please consult with the factory. Refer to Appendix B on page 71 for contact information.

Terms and Definitions

The following terms and definitions are used throughout this manual.

- **“ASCII”**: American Standard for Information Interchange. The standard code consisting of 7-bit coded characters (8 bits including parity check) used to exchange information between data processing systems, data communication systems, and associated equipment. The ASCII set contains control characters and graphic characters.

- **“Aspect ratio”:** The relationship of the horizontal dimension to the vertical dimension of an image. In viewing screens, standard TV is 4:3, or 1.33:1; HDTV is 16:9, or 1.78:1. Sometimes the －:1 is implicit, making TV = 1.33 and HDTV = 1.78**.**

- **“AV”**: Audio visual, or audio video.

- A **“Background”** is an unscaled source, typically originating from a computer. A background source appears at the system’s lowest priority — visually in back of all other sources.

- **“Baudrate”**： Named of J.M.E. Baudot, the inventor of the Baudot telegraph code. The number of the electrical oscillations per second, called baud rate. Related to, but not the same as, transfer rate in bits per second (bps).

- **“Blackburst”**: The video waveform without the video elements. It includes the vertical sync, horizontal sync, and the chroma burst information. Blackburst is used to synchronize video equipment to align the video output. One signal is normally used to set up an entire video system or facility. Sometimes it is called House sync.

- **“BNC”**: Bayonet Neill-Concelman. A cable connector used extensively in television and named for its inventors. A cylindrical bayonet connector that operates with a twist-locking motion. To make the connection, align the two curved grooves in the collar of the male connector with the two projections on the outside of the female collar, push, and twist. This allows the connector to lock into place without tools.

- **“light upness”**: Usually refers to the amount or intensity of video light produced on a screen without regard to color. Sometimes called —black level.

- **“CAT 5”**: Category 5. Describes the network cabling standard that consists of four unshielded twisted pairs of copper wire terminated by RJ-45 connectors. CAT 5 cabling supports data rates up to 100 Mbps. CAT 5 is based on the EIA/TIA 568 Commercial Building Telecommunications Wiring Standard.

- **“Color bars”**: A standard test pattern of several basic colors (white, yellow, cyan, green, magenta, red, blue, and black) as a reference for system alignment and testing. In NTSC video, the most commonly used color bars are the SMPTE standard color bars. In PAL video, the

most commonly used color bars are eight full field bars. In the computer, the most commonly used color bars are two rows of reversed color bars.

- **"Color burst"**: In color TV systems, a burst of subcarrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chroma signal. Color burst is 3.58 MHz for NTSC and 4.43 MHz for PAL.

- **"Color temperature":** The color quality, expressed in degrees Kelvin(K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the redder the light. Benchmark color temperature for the A/V industry include 5000°K, 6500°K, and 9000°K.

- **"Contrast ratio"**: The radio of the high light output level divided by the low light output level. In theory, the contrast radio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.

- **"DVI"**: Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.

- **"EDID"**: Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.

- **"Ethernet"**: A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.

- **"Frame"**: In interlaced video, a frame is one complete picture. A video frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still picture of a series that makes up a motion picture.

- **"Gamma"**: The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.

- **"HDMI"** - High – Definition Multimedia Interface: An interface used

primarily in consumer electronics for the transmission of uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics. Introduced in 2003, the HDMI specification has gone through several revisions.

- **"HDSDI"**: The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exists including progressive 1280x720 and interlaced 1920x1080 resolution. Up to 32 audio signals are carried in the ancillary data.

- **"JPEG"** (Joint photographic Expects Group): Commonly used method of lossy compression for photographic images using a discreet cosine transfer function. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality. Produces blocking artifacts.

- **"MPEG":** Motion Picture Expect Group. A standard committee under the auspices of the International Standards Organization working on algorithm standards that allow digital compression, storage and transmission of moving image information such as motion video, CD-quality audio, and control data at CD-ROM bandwidth. The MPEG algorithm provides inter-frame compression of video images and can have an effective compression rate of 100:1 to 200:1.

- **"NTSC"**: The color video standard used in North America and some other parts of the world created by the National Television Standards Committee in the 1950s. A color signal must be compatible with black-and-white TV sets. NTSC utilizes an interlaced video signals, 525 lines of resolution with a refresh rate of 60 fields per second (60 Hz). Each frame is comprised of two fields of 262.5 lines each, running at an effective rate of 30 frames per second.

- **"PAL"**: Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full pictures (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe, Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line, 50-filed (25 fps) composite color transmission system.

- **"Operator"**: Refers to the person who uses the system.

- **"PIP"**: Picture-in-Picture. A small picture within a larger picture created by scaling down one of the images to make it smaller. Each picture requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include Picture-by-Picture (PBP) and Picture-with-Picture (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a separate scaler for each video window.

1.Introduction

Terms and Definitions

- **“Polarity”**: The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).

- **“RJ-45”**: Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires, used for connecting Ethernet devices.

- **“RS-232”**: An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.

- **“Saturation”**: Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the light upness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.

- **“Scaling”**: A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.

- **“SDI”**: Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio.

- **“Seamless Switching”**: A feature found on many video switchers. This feature causes the switcher to wait until the vertical interval to switch. This avoid a glitch (temporary scrambling) which normally is seen when switching between sources.

- **“SMPTE”**: Society of Motion Picture and Television Engineers. A global organization, based in the United States, that sets standards for baseband visual communications. This includes film as well as video and television standards.

- **“S-video”**: A composite video signal separated into the luma (—Y ‖ is for luma, or black and white information; light upness) and the chroma (—C ‖ is an abbreviation for chroma, or color information).

- **“Sync”**: Synchronization. In video, sync is a means of controlling the timing of an event with respect to other events. This is accomplished with timing pulses to insure that each step in a process occurs at the

correct time. For example, horizontal sync determines exactly when to begin each horizontal scan line. Vertical sync determines when the image is to be refreshed to start a new field or frame. There are many other types of sync in video system.(Also known as —sync signal ‖ or —sync pulse. ‖)

- **“TCP/IP”**: Transmission Control Protocol/Internet Protocol. The communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.

- **“USB”**: Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.

- **“VESA”**: Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. www.vesa.org

- **“VGA”**: Video Graphics Array. Introduced by IBM in 1987, VGA is an analog signal with TTL level separate horizontal and vertical sync. The video outputs to a 15-pin HD connector and has a horizontal scan frequency of 31.5 kHz and vertical frequency of 70 Hz (Mode 1, 2) and 60 Hz (Mode 3). The signal is non-interlaced in modes 1, 2, and 3 and interlaced when using the 8514/A card (35.5 kHz, 86 Hz) in mode 4. It has a pixel by line resolution of 640×480 with a color palette of 16 bits and 256,000 colors.

- **“YCrCb”**: Used to describe the color space for interlaced component video.

- **“YPbPr”**: Used to describe the color space for progressive-scan (non-interlaced) component video.

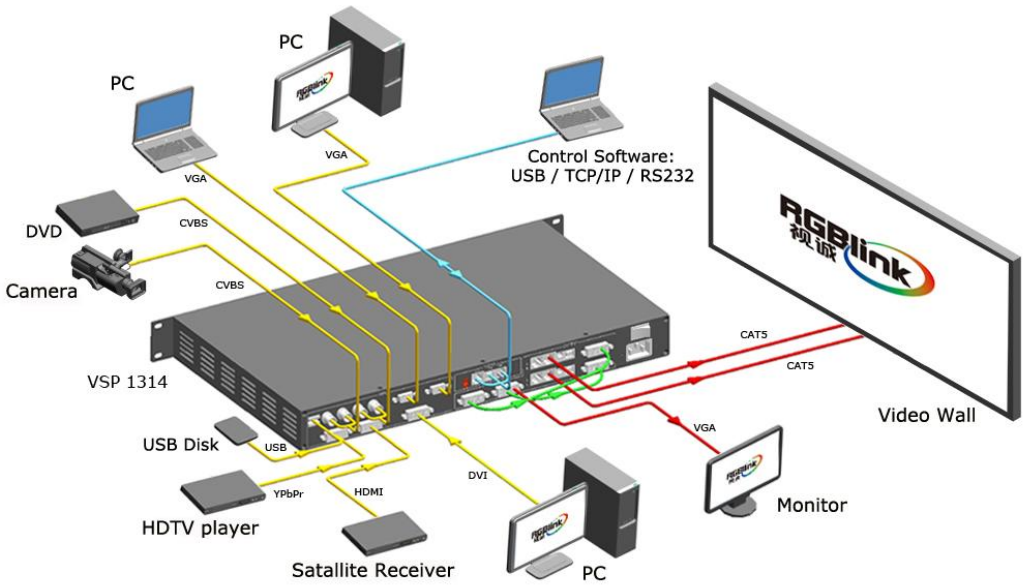
System Overview

The VSP 1314 is a 3 layers seamless switcher and scale that accepts a wide variety of video signals, including RGB computer-video, HDTV, which support 4 composite (CVBS),2 VGA, 2 DVI (compatible with HDMI1.3),2 USB inputs and 2 DVI3(background window). It combines truly seamless, glitch-free switching with advanced scaling technology to meet the requirement of high quality, high resolution video presentation. Use the switching transition effects can offer a wide range of effects, such ad full screen, dissolves and wipes with selectable durations as well as a cutt, the video transition effect is only enable for the program output .Numerous seamless transition effects, triple windows operation, variety user configuration, pixel-to-pixel, multiple save memory and remote control ways for integration,VSP1314 is designed to deliver advanced capabilities to high-end presentation environments. The VSP 1314 uses two editable input structures, one is CV1,CV2,VGA1,DVI1 and USB1 input, and the other is

CV3,CV4,VGA2,DVI2 and USB2 input ,it can process each input and monitor the image as well as the preview output ,user can send each input to preview monitor ,and after confirm, take the input to program output. VSP1314 offers three outputs, each can be set as program output or preview output and connect to the back end display system, including projector, LED display and conference system. The VSP 1314 is available to be controlled from the local color panel as well as through remote RS232,USB and Ethernet control. Local color panel matches green light (in the broadcast), yellow light(to be broadcast), red light(optional broadcast),and highlight OLED panel .Further more, presentation can be managed by using the RGBlink VSP1314 Window based software.

Application Questions

RGBlink offers solutions to demanding technical problems. Any application questions, or required further information, please contact with our Customer Support Engineers. Refer to Appendix B for contact details.



2. Hardware Orientation

In This Chapter

This chapter provides detailed information about the VSP 1314 hardware.

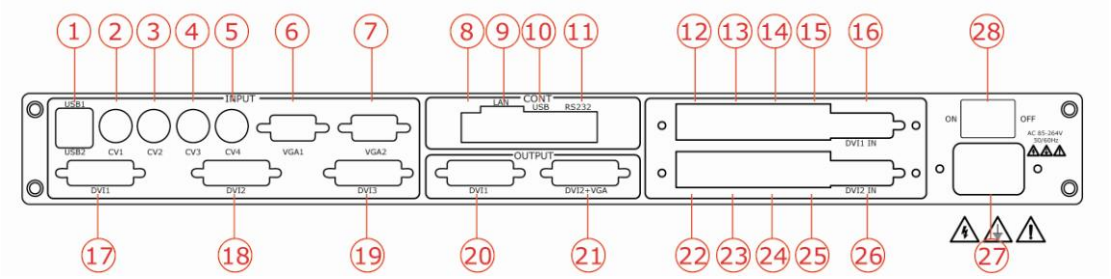
The following topics are discussed:

- VSP 1314 Rear Panel
- VSP 1314 Front Panel

VSP 1314 Rear Panel

This chapter provides detailed information about the VSP 1314 hardware.

The following topics are discussed:



NO.	INTERFACE	NO.	INTERFACE
1	USB Input	12.13.21.23	Gigabit copper port
2~5	CVBS Input	14.24	Power supply port of Sending card
6. 7	VGA Input	15.25	USB control port of sending card
8	Small push button	16~19.26	DVI Input
9	Remote control Interface	20.21	DVI Input
10	USB Interface	27	Power
11	RS232 Interface	28	Switch

INPUT Interface

Including 2 USB input, 4 composite input(CVBS), 2 VGA input DB15 interface, 3 DVI-I interface, compatible with HDMI input, and 1 DVI-I interface(18)is background input or splicing input.

1：USB Input

USB 1/2 media player input interface, can access USB device or mobile hard disk with USB storage function. Support image format: JPGE, BMP, PNG; and support video format: MP4, MPEG1, MPEG2, RMVB, MJPG. Can used to upgrade firmware.

2~5：CVBS Input

CVBS 1/2/3/4 input. Can receive standard video signal from players, cameras etc. Input supported resolution 480i and 576i via BNC. Supported standards include: PAL, NTSC and SECAM.

6.7: VGA Input

VGA 6/7 Input Interface, input the video signal from HD player and Computer, etc. Compatible with YPbPr signal, input signal via the DB15 interface.

17.18.19：DVI Input

DVI 17/18 input. Can receive video signal from HD player, DVD, Computer video signal via DVI connector, input supported resolution:
1080P50/59.94/60,1080i50/59.94/60, 720p50/59.94/60；PAL；NTSC,
VESA：1024×768×60Hz，1280×768×60Hz，1280×1024×60Hz，
1440×900×60Hz，1680×1050×60Hz，1600×1200×60Hz，
1920×1080×60Hz；
DVI 19 input interface. Background signal interface(DVI).Can receive video signal from laptop, computer, input signal via DVI interface;(Only can input DVI signal of standard computer graphics.

Remote Control Interface

8. Small push button

General use for 100M control panel, when the dial switch are down it means is in update station.

9. Remote control Interface

10. USB Interface

Remote communication device control interface, used to connect the computer.

11.RS232 Interface

Used to connect the computer.

OUTPUT Interface

12.13.22.23: Gigabit copper port

Gigabit copper port, connect to LED screen.

14.24：Power supply port of Sending Card

Power has been already supplied by video processor itself, don’t need external power supply.

15.25：USB control port of sending card

16.26：DVI Input

Input the DVI out originating from other video processors.（This DVI connector does not support hot-plugging）

20：DVI Output

Connect to the monitor or LED screen which has DVI interface（This DVI connector does not support hot-plugging）.

21：DVI +VGA-DVI Output

Connect to the monitor or LED screen which has DVI interface.（This DVI connector does not support hot-plugging）.

DVI +VGA , VGA output connector can be connected to monitor or projector which has VGA interface.

Note

Via adapter, can connect with DVI-based or VGA-based equipment, and via，

DVI to VGA adapter, can output VGA only.

Switch and Power

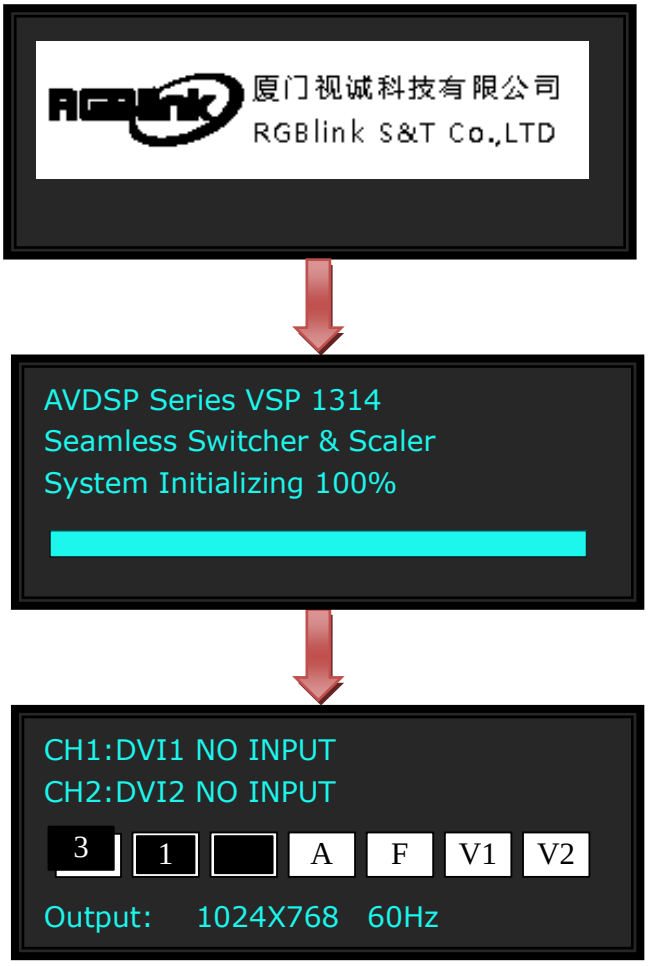
27.28：Power Interface and Switch

AC 90-264V 3.8A　50/60Hz　IEC-3 Power Interface

VSP 1314 Front Panel

Insert power cord and push power to ON position. LCD module on the front panel will show RGBLINK and go into self verification before it load last setting config and send processed image to the target monitor. For the first setup, DVI input is default source. With front panel keyboard, user can operate VSP 1314 through the menus on LCD panel.

VSP 1314 front panel as shown in figure:

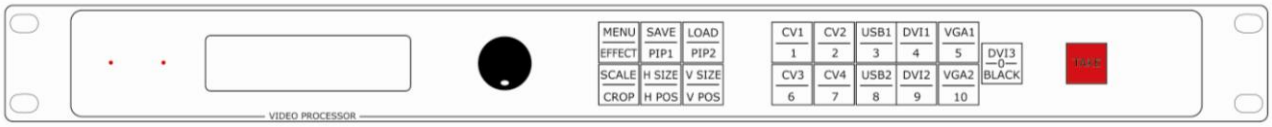


When startup the system, it will enter to menu, and will refresh LCD module menu display state automatically every 2 minutes. Display content are input signal information and format, output format, etc on default settings.

2.Hardware Orientation

VSP 1314 Front Panel

VSP 1314 front panel as following:



LCD panel

Used to show the key and communication interactive menu.

Menu Buttons

Color operation panel:

Green light means on work;

Red light means optional choice for work;

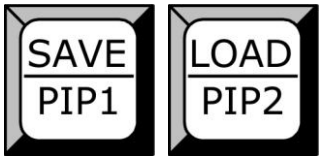
MENU/EFFECT：Menu and Effect function multiplexing button;

Press it and light up green to enter to Menu function, the LCD panel shows content of MENU, rotate and press the adjust knob select MENU. Press again to reback the last Menu. LCD panel shows as following:

Detail please refer to Manu Orientation.

Press button and light up red to enter to EFFECT function, LCD panel shows the menu of EFFECT. Rotate the adjust knob and press to select the EFFECT Mode, LCD shows as following:

Detail please refer to How to select switching effect.



PIP mode multiplexing button；

Press button

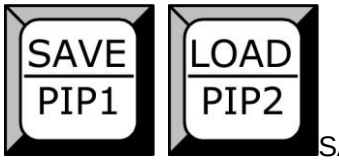
and light up red, that means is1/2 mode; layer 1 above layer2；

Press button

and light up red, that means is 2/1 mode; layer 2 above layer1；

LCD shows as following:

Detail please refer to How to set picture in picture.

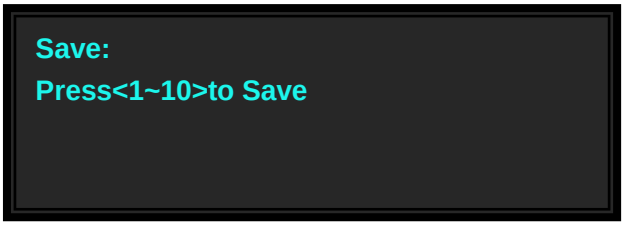


SAVE and LOAD muitiplexing button;

Press button

and light up green to enter to Save mode at the same time CV1/1, CV2/2, USB1/3, DVI1/4, VGA1/5, CV3/6, CV4/7, USB2/8, DVI2/9, VGA 2/10 all of them light up green ,The figure :1，2，3，4，5，6，7，8，9，10,down of the button also light up green, It means you can press arbitrary button to save. And the LCD panel will show Save Success after finish saving. And all the button will recover to its original state.

LCD shows as following:

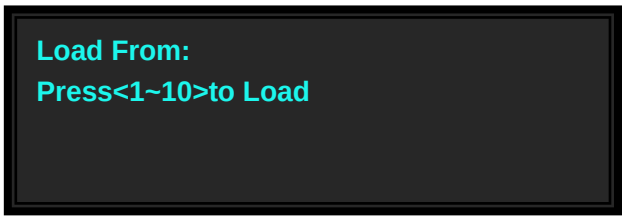


Detail please refer to How to save parameter.

Press button

and light up green to enter to LOAD mode, at the same time CV1/1, CV2/2, USB1/3, DVI1/4, VGA1/5, CV3/6, CV4/7, USB2/8, DVI2/9, VGA 2/10 all of them light up green ,the figure of 1，2，3，4，5，6，7，8，9，10under button is load save1~10，press arbitrary button1~10 to load save.LCD will show Load From, after finish loading, the button which selected will light out, and other 9 lights light up still. It means can load other information .Press button again the green light light out it means have exit Load mode.

LCD shows as following:



Detail please refer to How to load parameter

SCALE/CROP：SCALE and CROP setting muitiplexing button

Press button, light up green to enter to SCALE mode;

Press button, light up red to enter to CROP mode;

H SIZE/H POS：Height and vertical position setting muitiplexing button;

Press button, light up green to enter to height setting;

Press button, light up red to enter to vertical position setting;

V SIZE/V POS：Width and transverse position setting muitiplexing button;

Press button, light up green to enter to width setting;

Press button, light up red to enter to transverse position setting;

2.Hardware Orientation

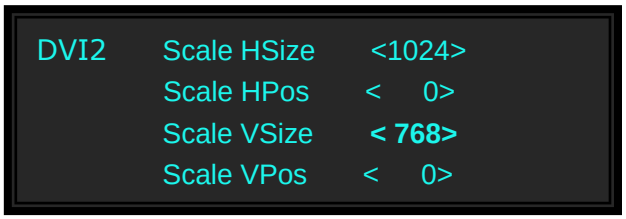
VSP 1314 Front Panel

Three key combination use as following:

SCALE：

Press **SCALE/CROP**，light up green to enter to Scale setting; At the same time **H SIZE\H POS** light up green, rotate the adjust knob can adjust the height of picture; Press **H SIZE\H POS** ,light up red to enter to light-vertical position setting, rotate the adjust knob can adjust the position of vertical; Press **V SIZE/V POS** ,light up green to enter to Width setting, rotate the adjust knob, can adjust width of picture; Press **V SIZE/V POS**, light up red to enter to transverse position setting, rotate the adjust knob can adjust the position of transverse;

LCD shows as following:



CROP：

Press **SCALE/CROP**，light up red to enter to scale setting; At the same time when **H SIZE\H POS** light up green to enter to height setting, rotate the adjust knob can adjust the height percentage; Press **H SIZE\H POS**, light up red to enter to vertical position setting, rotate the adjust knob, can adjust the vertical percentage; Press **V SIZE/V POS**, light up green to enter to width setting, rotate the adjust knob can adjust the width percentage; Press **V SIZE/V POS** ,light up red to enter to transverse position setting, rotate the adjust knob can adjust the transverse position percentage;

2.Hardware Orientation

VSP 1314 Front Panel

Note

The percentage of CROP is the current output resolution percentage, after scale set full screen. Such as resolution is: 1024x768，set width as 50,set transverse position as 0,height as 50,set vertical position as 0.That is scale the 1/4 picture of full screen at the top right corner as 1024x768 output.

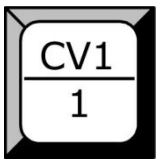
LCD shows as following:

The color of signal button：

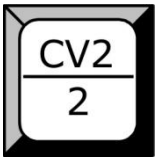
Green light means signal output to program ;

Yellow light means signal output to preview;

Red light means can switch signal at preview;



CV1/1：CV1 signal source and SAVE 1 and Load 1 muitiplexing button;



CV2/2：CV2 signal source and SAVE 2and Load 2 muitiplexing button;

USB1/3：USB1signal source and Save 3 and Load 3 muitiplexing button;

2.Hardware Orientation

VSP 1314 Front Panel

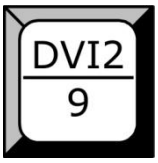
DVI1/4：DVI1signal source and Save 4 and Load 4 muitiplexing button;

VGA1/5：VGA1signal source and Save 5 and Load 5 muitiplexing button;

CV3/6: CV3 signal source and Save 6 and Load 6 muitiplexing button;

CV4/7：CV4 signal source and Save 7 and Load 7 muitiplexing button;

USB2/8：USB2 signal source and Save 8 and Load 8 muitiplexing button;



DVI2/9：DVI2 signal source and Save 9 and Load 9 muitiplexing button;

VGA2/10：VGA2 signal source and Save 10 and Load 10 muitiplexing button;

DVI3/BLACK：DVI3 signal source and BLACK muitiplexing button;

Detail please refer to How to set DVI3 as background

Detail please refer to How to splicing with DVI3

Detail please refer to How to use BLACK

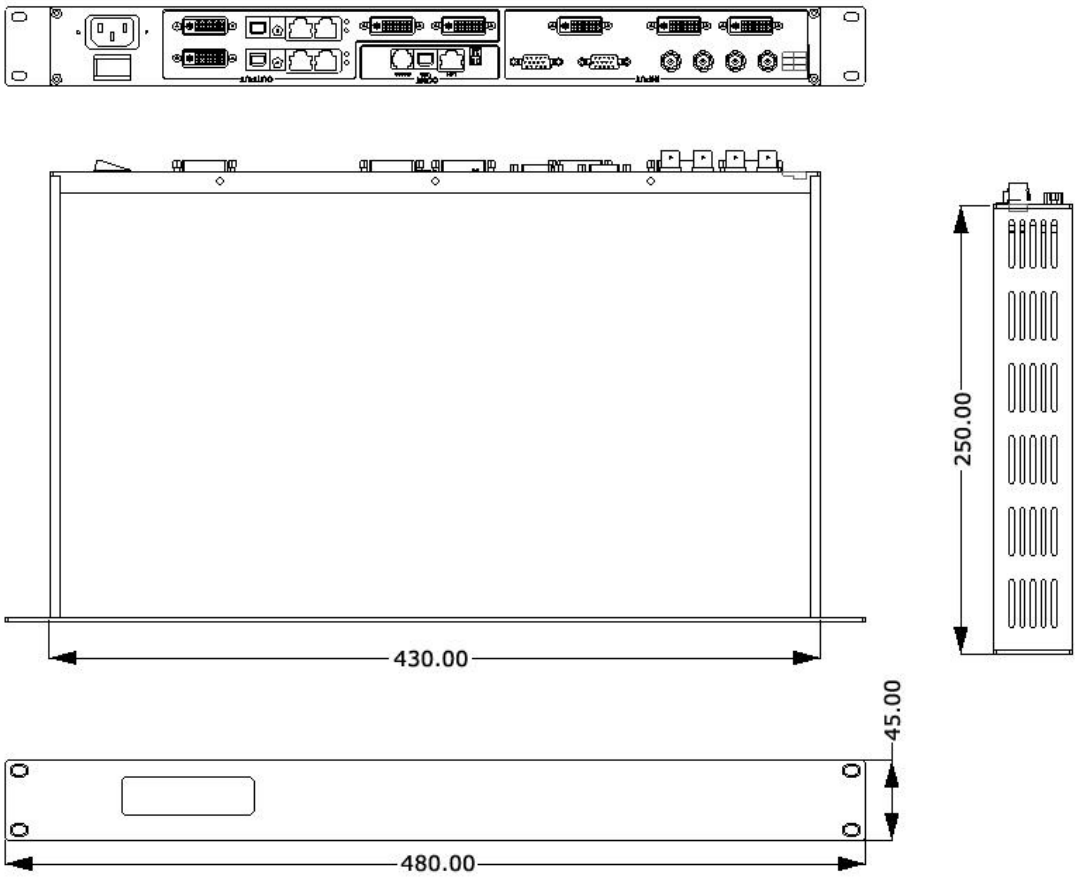
TAKE: Seamless Switching button.

Press button to switch Preview to Program;

3. Hardware Installation

In This Chapter

This chapter provides comprehensive installation instruction for VSP 1314 hardware： Following is the size of VSP 1314 for your reference.



Safety Precautions

For all VSP 1314 processor installation procedures, please observe the following important safety and handling rules to avoid damage to yourself and the equipment.

- To protect users from electric shock, ensure that the chassis connects to earth via the ground wire provided in the AC power Cord.
- The AC Socket-outlet should be installed near the equipment and be easily accessible.

Unpacking and Inspection

Before opening VSP 1314 process shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative. Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect the system to ensure there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

Site Preparation

The environment in which you install your VSP1314 should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

4. Menu Orientation

In This Chapter

This chapter describes all VSP 1314 processor menus, including how they are accessed, the functions that are available, and descriptions of each menu tree (in block diagram format).

The following topics are discussed:

- **MENU**
  - Input
  - Output
  - Split
  - View
  - USB Setting
  - Test Pattern
  - Language
  - System
  - OLED Luminace
  - Video Firmware Update
  - Key Pad Lock
  - Factory Reset
- **EFFECT**

4.Menu Orientation

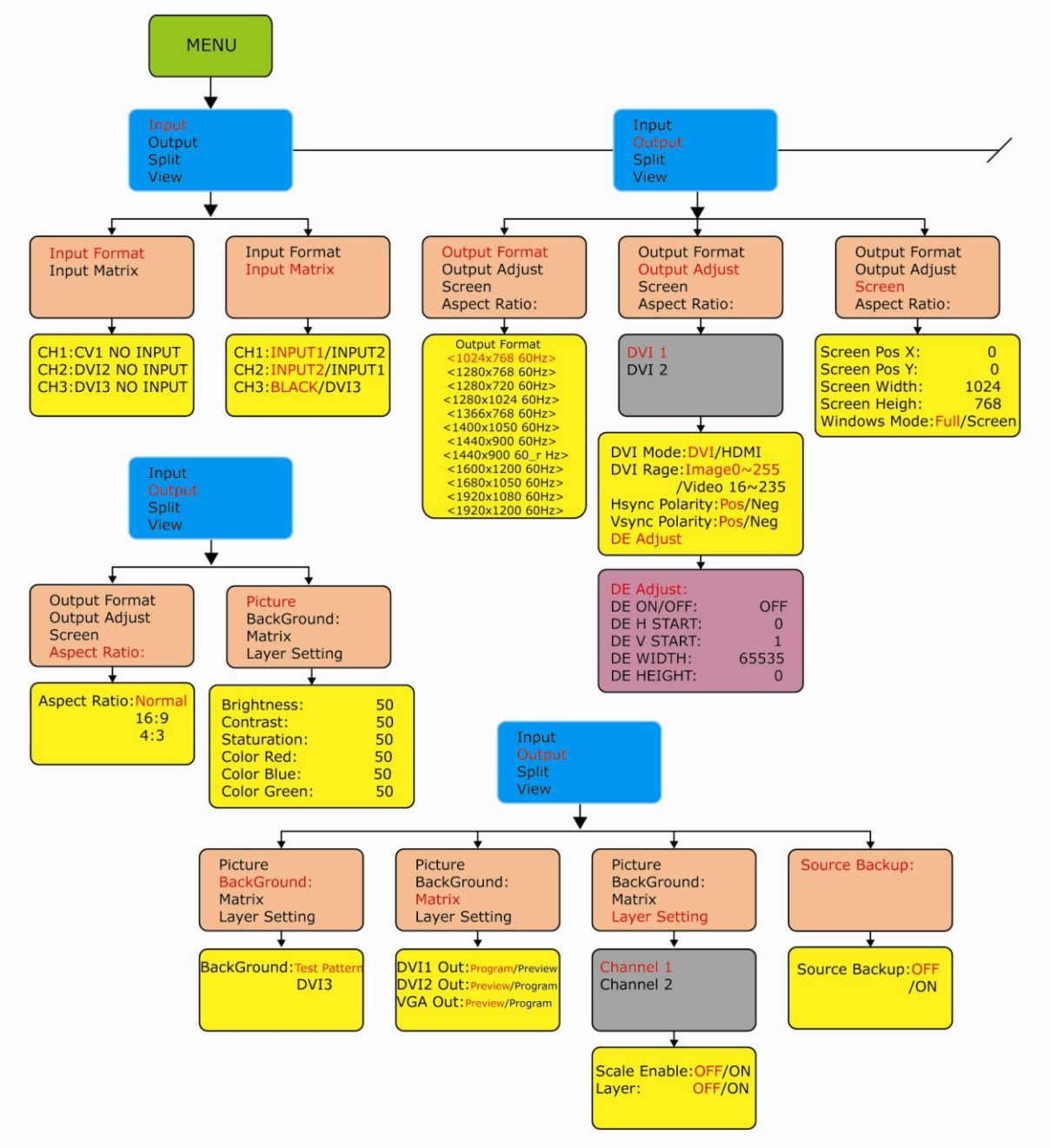
MENU

MENU

Press MENU/EFFECT, button light up green light, that is you can enter the main menu, as following:

rotate the adjust knob can select the up and down menu item; When the menu item added to a blue bar ,it means is in a selected state, press knob to make sure and enter to the corresponding menu to set or view.

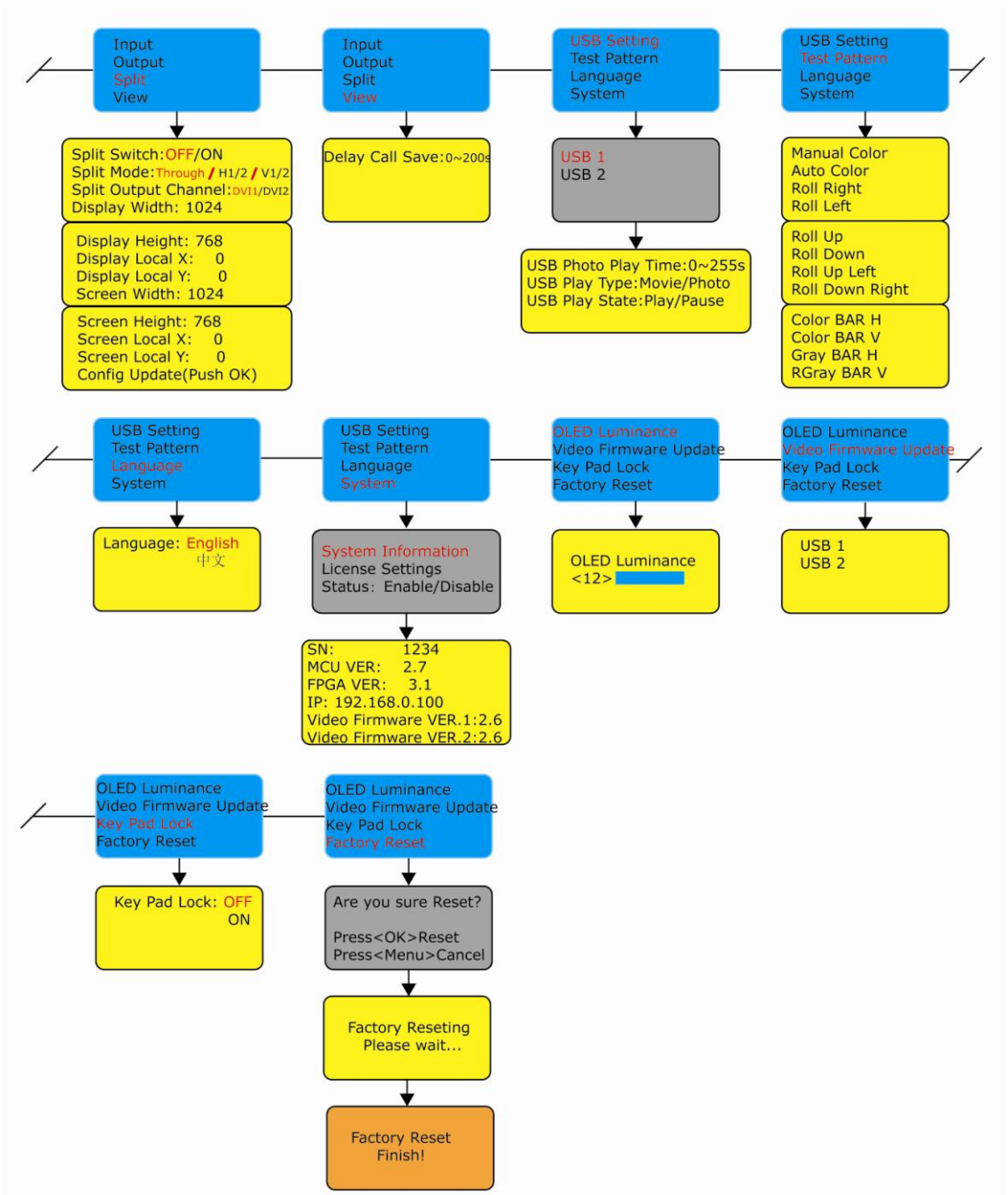
Picture 1：



4.Menu Orientation

MENU

Picture 2：



4.Menu Orientation

MENU

MENU---Input

Press MENU/EFFECT ,it light up green to enter to MENU and rotate the adjust knob to select Input and press to make sure.LCD panel show the information of input resolution and input matrix ;As picture above. If user need to change input signal source ,rotate the adjust knob to select the matrix, press knob can enter the corresponding channel setting; Channel 1 and Channel 2 can input 1 or input 2,Channel 3 can select test picture or input DVI3.

MENU---Output

Press MENU/EFFECT，it light up green to enter to MENU, and rotate the adjust knob to select the Output, press to make sure, now can set the following options respectively, as picture 1:

Output resolution：Select this option user can select output resolution according need, current support 12 kinds of resolution ,were as following: 1024x768_60Hz,1280x768_60 Hz,1280x720_60 Hz,1280x1024_60 Hz, 1366x768_60 Hz,1400x1050_60 Hz,1440x900_60 Hz, 1440x900_60_r Hz, 1600x1200_60 Hz,1680x1050_60 Hz,1920x1080_60 Hz,1920x1200_60 Hz.

Detail please refer to How to adjust output resolution.

Output currention：For DVI1 or DVI2 can set DE and can select coding format of output signal(can select HDMI or DVI),And also can adjust color range of video and image also can select the polarity of Horizontal and vertical.

Select DE, press knob to set corresponding submenu, first of all to set DE Setup switch; rotate the adjust knob to select ON ,then press the knob to make sure and enter to DE setting, can up or down of menu:

DE H Start: Abscissa setting; DE V Start: Ordinate setting;

DE Width: Width setting; DE Height: Height setting;

4.Menu Orientation

MENU

When input signal to the large screen, boundary appear black side, can use this function to adjust to make full screen display.

Select DVI1, rotate the adjust knob can choice the HDMI/DVI interface, Default interface is DVI output. If you need HDMI output, please select HDMI.

Select DVI1 also can choice color format, Color range of video format is 16-235, color range of image format is 0-255.

The same method can be applied to set the DVI2 output.

Screen setting: (Including above setting):

Screen Pos X：Horizontal coordinate setting;

Screen Pos Y：Vertical coordinate setting;

Screen Width：Width setting;

Screen Height：Height setting;

Window Mode: Can switch between Screen Full .

User can use USB1~USB4 to upgrade firmware.

Output ratio：Proportional setting menu:

Normal ；4：3 aspect ratio；16：9 aspect ratio，rotate the adjust knob can switch between aspect ratio;

Image adjustment：

light upness：Can change the light upness of the image;

Contrast：Can change the color contrast of image;

Saturation：Can change the color temperature value of image;

Color Red ：Can change the red of image;

Color Green：Can change the green of image;

Color Blue：Can change the blue of image;

User can adjust and set according to actual condition. This function mainly suitable for professional to operate image quality. Nonprofessional don't recommend to operate above setting. If image quality were distortion because of improper operation, can reply the factory setting.

In addition need to adjust the numerical range at 0~174，other at 0~255.

Background： rotate the adjust knob can choice the background, TP is Test Picture,DVI3 is Background input .

Note

Background resolution of image is the same with output resolution；

Detail please refer to How to set DVI3 as background.

Matrix：

VSP1314 with output programmable matrix function. That is can copy random channel at one channel, means can output Program or Preview arbitrarily: can output DVI1 or DVI2 or VGA arbitrarily. That is every port can set as program or preview: DVI1 output also can set Preview output, DVI2 or VGA also can set Program output. The difference between Program and Preview is the Preview picture have effect switching mode, and the Program just have cut switching mode.

Detail please refer to How to set Input matrix.

Layer setting： Can close and open layer of channel 1 or channel 2.And can close SCALE when the input signal source less than 289, that can reduce image appear flowers screen probability.

Signal Backup： If open the Signal Backup, equipment will search other signal source automatically as Program output of the same channel when Program signal snapped, to make large screen do not appear black screen; But if there are no input signal source of the same channel, will appear black screen.

MENU---Split

VSP1314 also can work as seamless splicing unit, use DVI3 to as splicing unit input signal, support horizontally splicing or vertical splicing;

Detail please refer to How to splicing with DVI3

4.Menu Orientation

MENU

MENU---View

Delay Call Save: Set delay the output time. When more than one equipment power on, and the processor is the end equipment in order to improve question that can't identify the input signal and phenomenon that LED screen appear messy code and flash screen, now need to delay the input time.

MENU---USB Setting

USB Photo Play Time; Use this when you need play photo for o long time.

USB Play Type，picture and video mode be selected by user, USB can't play picture and video at the same time.

USB Play State: Can set playing or stopping mode.

MENU---Test Pattern

Automatic color change test, enter can set the automatic change time; Manual color change test, enter can set RGB and 6 kinds of rolling test picture, 2 kinds of striped test picture,2 kinds of gray scale test picture. Detail menu of TP as Picture2.

Detail please refer to How to Test Pattern

MENU--- Language

Enter LANGUAGE ：Can select English or Chinese.

MENU--- System

System information:

SN：The serial number of this processor, you can check the product information according this number;

MCU VER：Version information of MCU；

FPAG VER：Version information of FPGA；

IP：Information of IP；

Video Firmware VER：Version information of Video Firmware;

4.Menu Orientation

MENU

Authorized setting：This product have been using time limited by our company, if it is service life and need to continue to use, you must to contact with our sales or service to get the password.

State：Authorized and unauthorized；

MENU--- OLED Luminance

Enter can set the luminance of font；

MENU--- Video Firmware Update

User can update video firmware via USB1~USB4.

MENU--- Key Pad Lock

Enter can set whether key pad lock; If open it, operating other buttons are invalid; release it, shall also press < Menu > and < Take > key to unlock! This function mainly in order to prevent the user misoperation.

MENU---Factory Reset

Select it, press the knob to reset factory; It will show Factory Reset Finish if success. As picture2;

EFFECT---EFFECT Switching

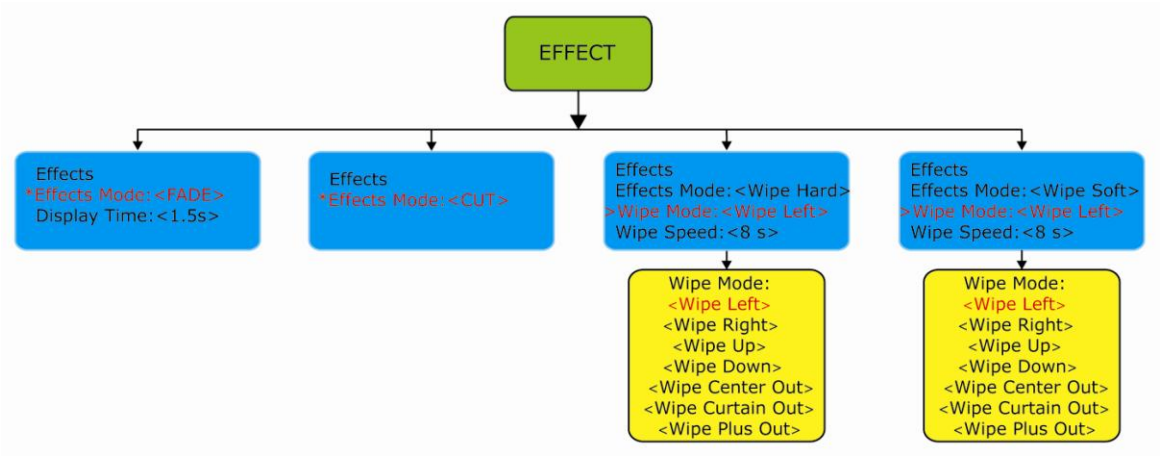
Press MENU/EFFECT to enter to EFFECT if light up red ; Press the adjust knob can set EFFECT; There are: Fade in Fade out , CUT, Wipe Hard, Wipe Soft Wipe Hard and Wipe Soft have 7 kinds of seamless switching mode: Wipe Left、Wipe Right、Wipe Up、Wipe Down、Wipe Center Out、Wipe Curtain Out、Wipe Plus Out；But only Wipe Soft has soft effect;

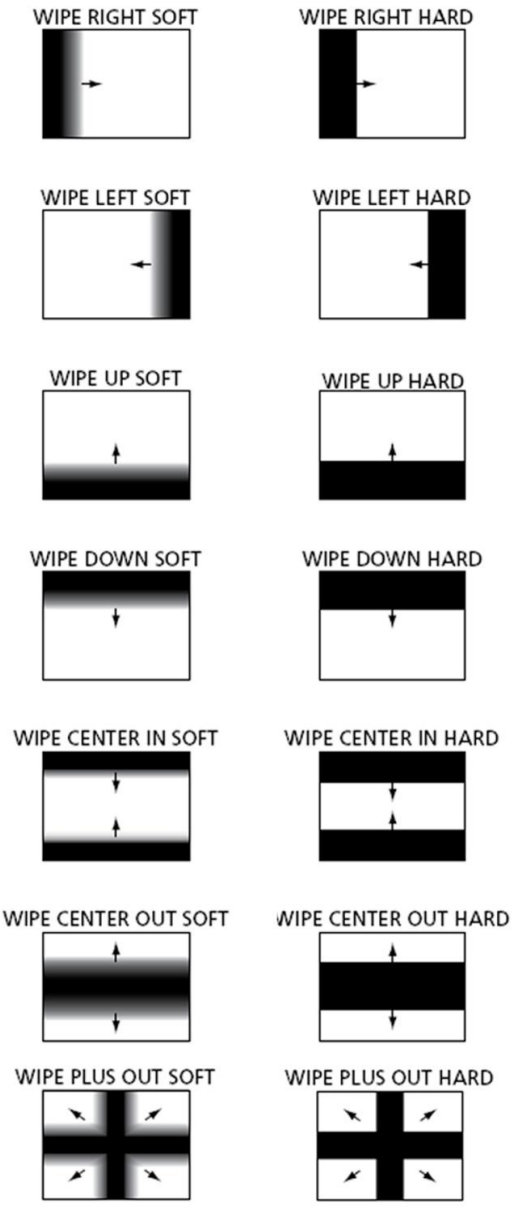
Cut :Cut Left、Cut Right、Cut Down、Cut Up、Cut Square、Cut Curtain、Cut Center. It also supports the user defined switching speed; Adjustment value range is “0.5 s-30.0 s”

Detail please refer to

4.Menu Orientation

MENU





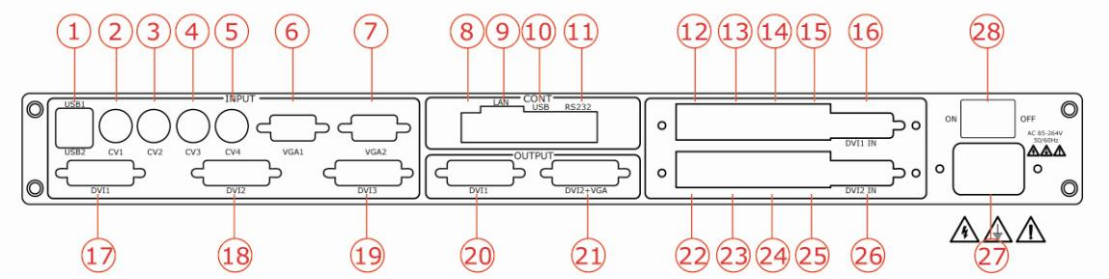
5. System Setup and Operation

In This Chapter

This chapter provides detailed information about the control communication software. The following topics are discussed:

- How to connect equipment
- How to make equipment normal operation
- How to preview input signal source
- How to adjust output resolution
- How to adjust size and position of image
- How to scale image
- How to switch signal of single image
- How to set picture in picture
- How to select switch effect
- How to set input matrix
- How to set DVI3 as background
- How to splicing with DVI3
- How to use BlACK
- How to use Test Pattern
- How to save parameter
- How to load parameter

How to connect equipment



NO	INTERFACE	NO	INTERFACE
1	USB Input Interface	12.13.21.23	Gigabit nets connector
2~5	CVBS Input Interface	14.24	Send card power source
6. 7	VGA Input Interface	15.25	Send card USB control connector
8	Small push button	16~19.26	DVI Input Interface
9	Remote control Interface	20.21	DVI Input Interface
10	USB Interface	27	Power
11	RS232 Control Interface	28	Switch

20. System default DVI1 output as program output, main connect sending card of large screen,VSP1314 support resolution as following :

1 024x768_60Hz,1280x768_60 Hz,

1280x720_60 Hz,1280x1024_60 Hz,

1366x768_60 Hz,1400x1050_60 Hz,1440x900_60 Hz, 1440x900_60_r Hz,

1600x1200_60 Hz,1680x1050_60 Hz,1920x1080_60 Hz,1920x1200_60 Hz.

Note

Select output resolution via MENU⟶ OUTPUT OUTPUT⟶ FORMAT.

21. System default DVI2+VGA output interface as preview output. Preview output signal before output via displayer. Output signal is DVI video signal and VGA video signal, can connect display that with DVI or VGA interface

to preview signal. Output signal via DVI-I interface（Preview adopt standard DVI-I interface, compatible with VGA output, switch VGA output via terminil.)

Support output resolution:

1024x768_60Hz,1280x768_60 Hz,

1280x720_60 Hz,1280x1024_60 Hz,1366x768_60 Hz,1400x1050_60 Hz,1440x900_60 Hz, 1440x900_60_r Hz, 1600x1200_60 Hz,1680x1050_60 Hz,1920x1080_60 Hz,1920x1200_60 Hz。

Note

Set DVI1,DVI2,VGA as program output or preview output via MENU→ OUTPUT →Matrix

In addition to CONT and send card and power interface, others are signal input interface, **DVI（DVI-I Interface）** can connect DVI output of computer and can connect HDMI output of computer or HDMI output of DVD via DVI-HDMI cable;

VGA（DB15 Interface）can connect VGA output of computer or YPBPR of DVD via VGA-YPBPR;

CVBS（BNC Interface）can connect composite video output of DVD or composite video output of VCR via RCA-BNC cable;

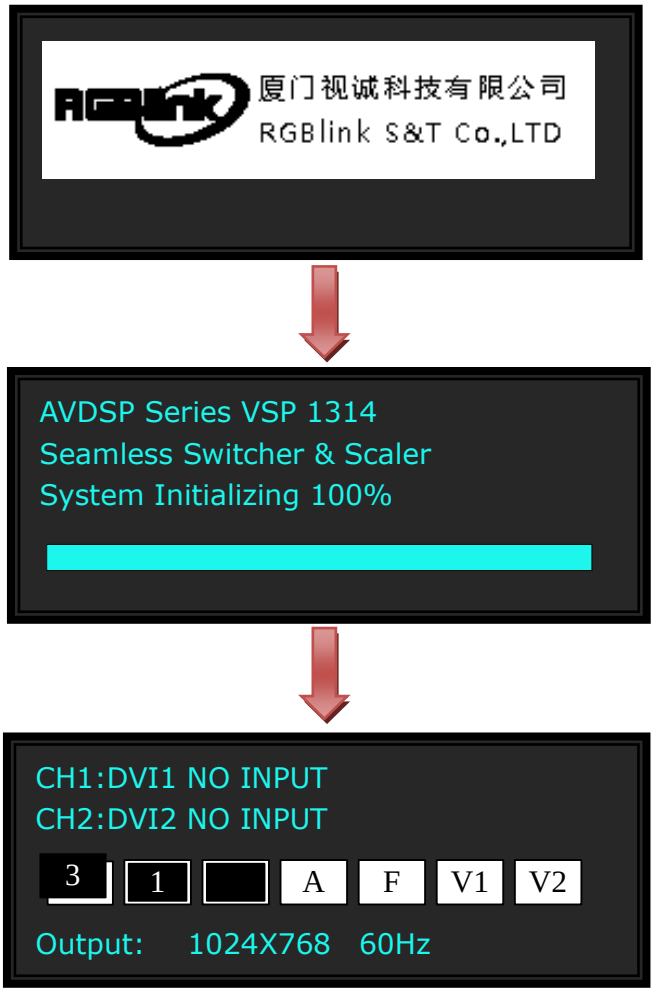
USB（USB-A Interface）can connect USB or mobile HDD with USB. Support image format ：JPGE,BMP,PNG ；Support video format：MP4, MPEG1, MPEG2, RMVB, MJPG. This interface also used to upgrade 6M48.

27.AEC：The range of power: AC 85-264V 50/60Hz

28. Power switch**.**

How to make equipment normal operation

1. Make sure equipment normal operation;
2. After power on equipment starts self state, fan starts, scan button;
3. After scanning, LCD will show as following:



4. After starting, equipment default load factory parameter or save 1 system parameter, the function button light;
5. Equipment is started normal.

How to preview input signal source

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

Operation as following：

1. The signal of green light output from Program, can check output if connect monitor or LED screen send card;

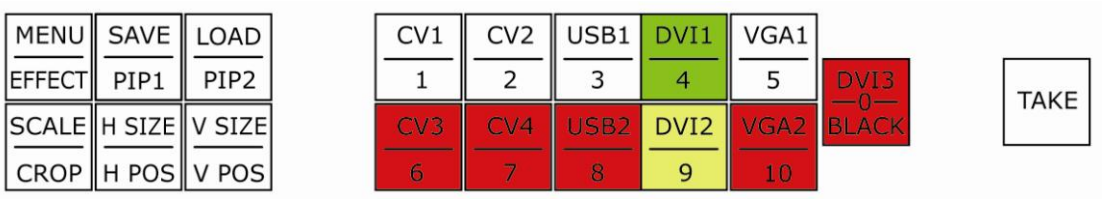
2. The signal of yellow light output from Preview, can check output if connect monitor;

3. The signal of red light can preview switching, can check image at preview output;

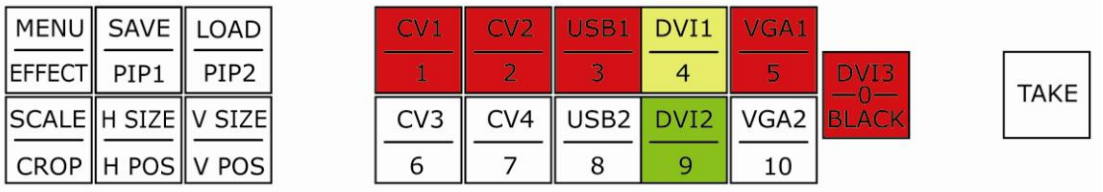
4. System default DVI as Program output,DVI2 and VGA as Preview output;

5. Schematic diagram 1 switch to Schematic diagram 2,just to press TAKE.

Schematic diagram 1：



Schematic diagram 2:



How to adjust output resolution

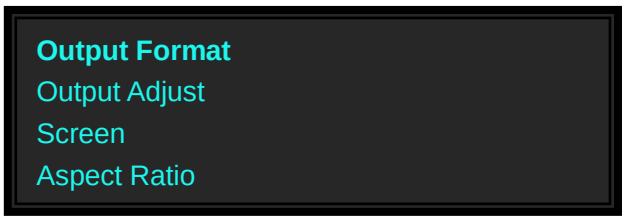
Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

Operation as following:

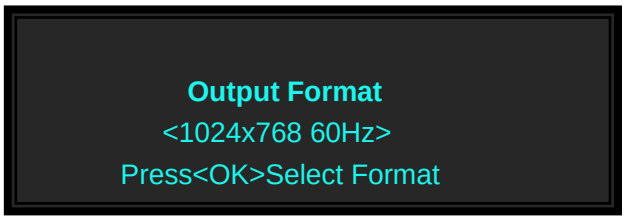
1. Press

light up green light to enter to MENU;
2. LCD shows the menu mode, rotate the adjust knob to select OUTPUT;

3. Press knob to make sure. Enter to OUTPUT to select Output Format;



4. Press knob to make sure. Enter to Output Format; Press knob to select resolution, then press to make sure;



How to adjust size and position of image

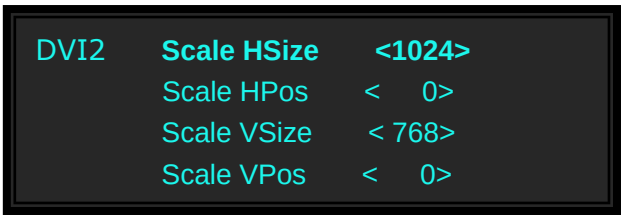
Make sure equipment normal operation. Detail please refer to : How to make equipment normal operation

Operation as following:

Three button combination operation as following:

SCALE：

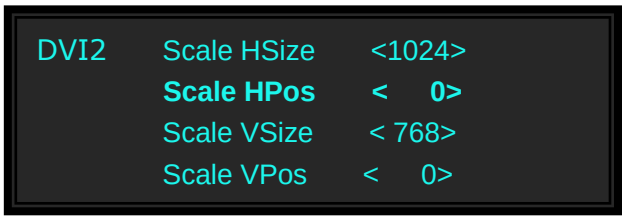
1. Press **SCALE/CROP**，light up green light-SCALE setting;
2. Press **H SIZE\H POS**, light up green-Height setting, rotate the adjust knob can adjust the height of image;



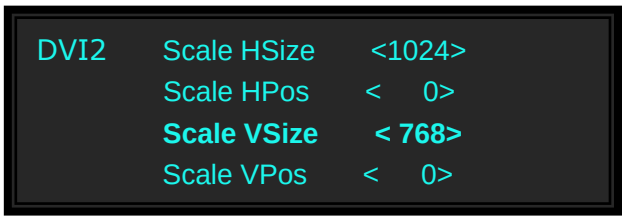
3. Press **H SIZE\H POS**, light up red light-transverse position setting, rotate the adjust knob, can adjust the position of transverse;

5.System Setup and Operation

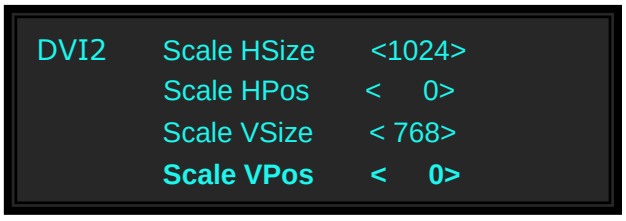
How to adjust size and position of image



4. Press **V SIZE/V POS** ,light up green light-Width setting, rotate the adjust knob can adjust the height of image;



5. Press **V SIZE/V POS**, light up red light-vertical position setting, rotate the adjust knob can adjust the position of vertical;



Note: The scale height is limited when input CVBS signal, only 288 pixels is achievable. You can follow the below steps for more choices:

Select "Program"⟶ enter into "Program Scale"⟶ select "CV3"⟶ select "Layer Setting"⟶select "Scale Enable" and "Layer On"⟶enter into SCALE", then scale the desired height.

How to scale image

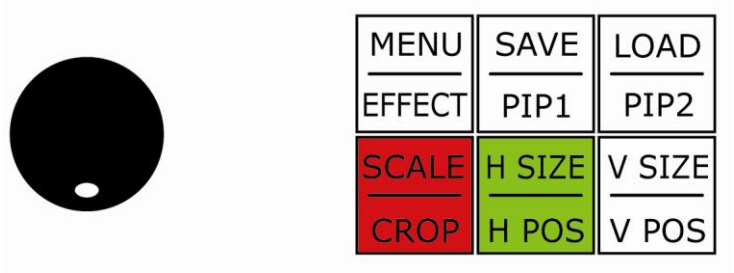
Make sure equipment normal operation. Detail please refer to: How to make equipment normal operation

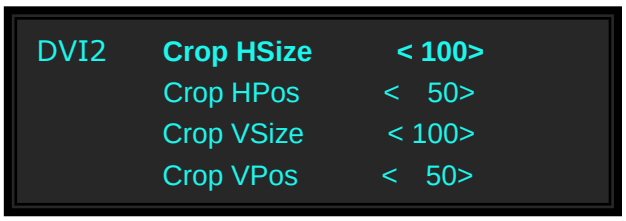
Operation as following:

Three button combination operation as following:

CROP:

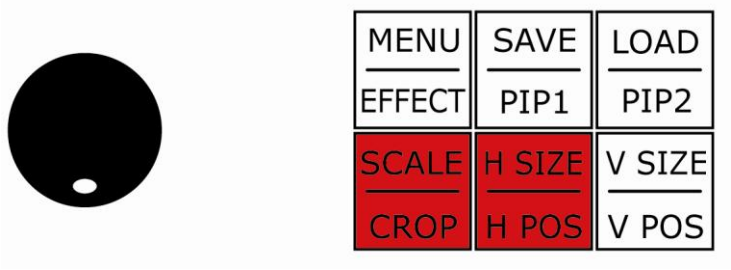
1. Press **SCALE/CROP**，light up red light-scale setting;
2. Press **H SIZE\H POS**, light up green light-Height setting, rotate the adjust knob can adjust height of image;





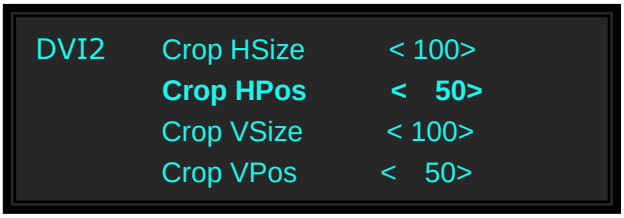
3. Press **H SIZE\H POS ,**light up red light-transverse position

setting, rotate the adjust knob can adjust position of TRANSVERSE**;**

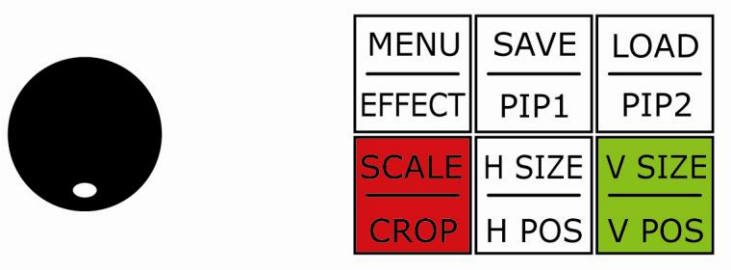


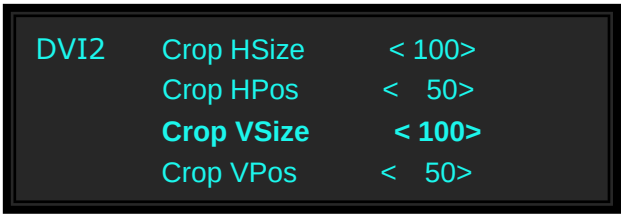
5.System Setup and Operation

How to scale image

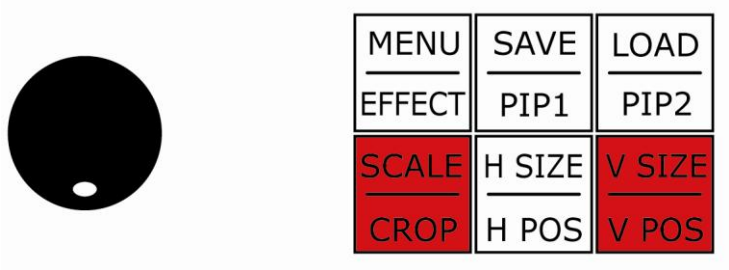


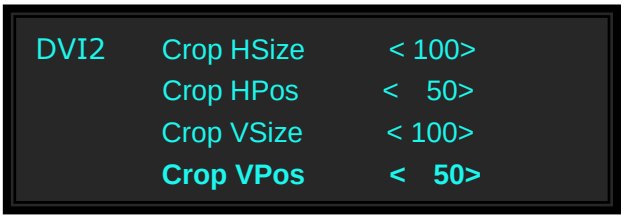
4. Press **V SIZE/V POS,** light up green light-width setting, rotate the adjust knob can just width of image;





5. Press **V SIZE/V POS ,**light up red light-vertical position setting, rotate the adjust knob can adjust the position of vertical;





How to switch signal of single image

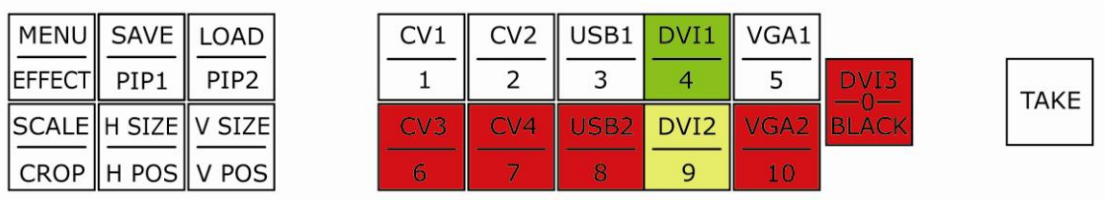
Make sure equipment normal operation. Detail please refer to:How to make equipment normal operation

Operation as following:

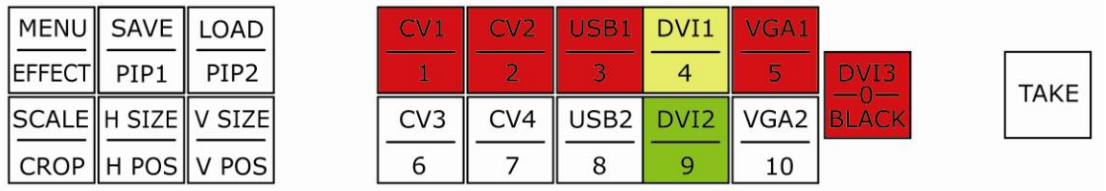
Layer 1 is the program output signal source from DVI. Now DVI light up green light, and the other signal button are light out that at the same layer, can't to be selected; If need to switch program input signal, can select signal button of other layer arbitrarily；When DVI2 light up yellow light, it means DVI2 output to Preview, other signal button light up red light, user according to the need to select the button and light up yellow light ,Press TAKE to switch the selected signal to Program output.

Operation as following:

Operation schematic diagram1：



Operation schematic diagram2：



VSP 1314 support display 3 layers :

Layer 1 including:CV1,CV2,USB1,DVI1,VGA1 ,

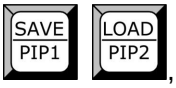
Layer 2 including:CV3,CV4,USB2,DVI2,VGA2 ,

Layer 3 is background input, user can set DVI3 as background signal or as test pattern.

How to set picture in picture

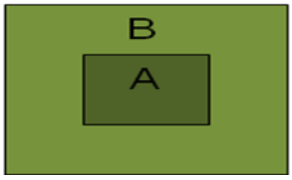
Make sure equipment normal operation. Detail please refer to: How to make equipment normal operation

PIP Functional description:

Before press 

, make sure signal firstly;

Such as want set VGA1 as big picture, size is::960x672，and set DVI2 as small picture, size is:384x384, position is:X-288,Y-144



Operation as following:

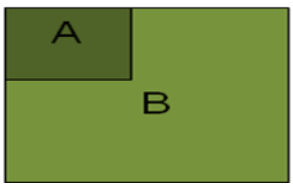
1. Set VGA1 as Preview output, scale to:960x672；
2. Press TAKE to switch VGA1 as Program output;
3. Set DVI2 as Preview output, scale to:384x384,and adjust position to：X-288,Y-144；
4. Press

,and button light up red ;
5. PIP mode 1:Press

and light up red as following:

6. PIP mode 2:Press

and light up red, as following:



How to select switching effect

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

Operation description:

TAKE is the effect switch button. The switching effect must be sett in menu.

After setting, press TAKE to switch.

Operation as following:

1.Press

and button light up red; Rotate the

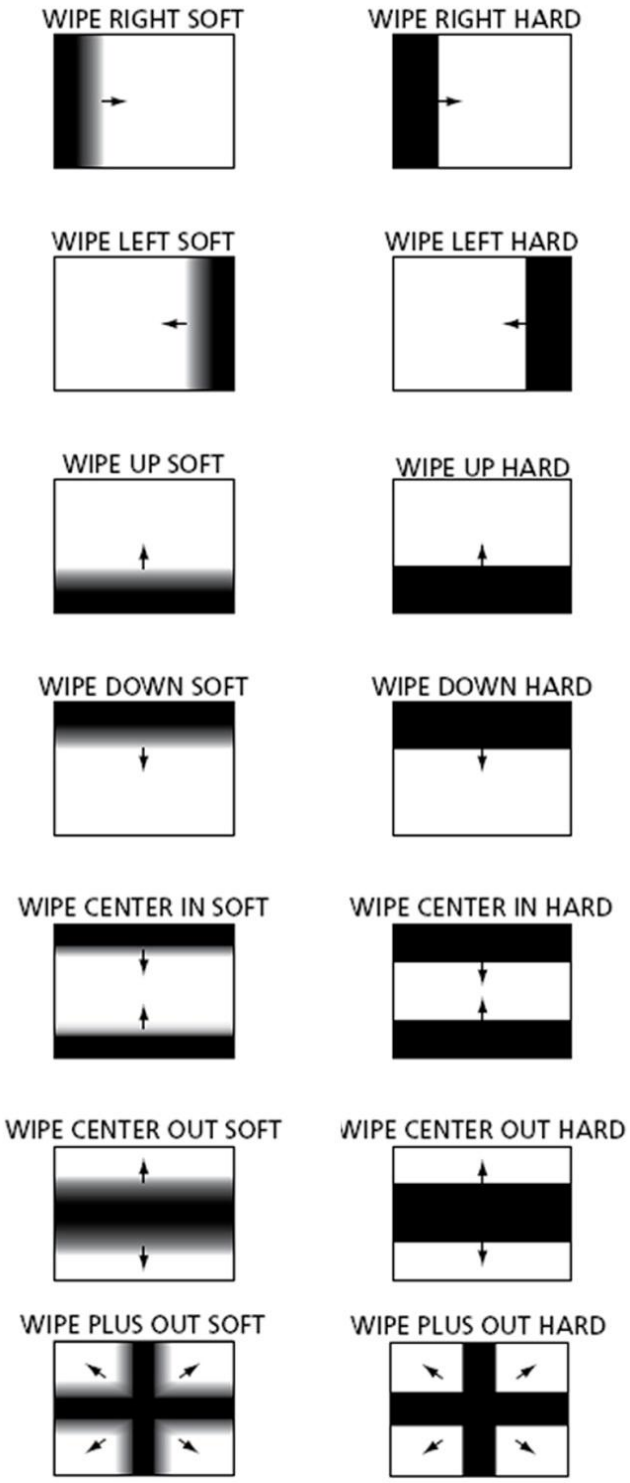
2. Adjust knob to select switch effect. There are 4 kinds of switch effect:

Cut、Fade in Fade out、Wipe soft、Wipe hard；

5.System Setup and Operation

How to select switching effect

3. Press the adjust knob to ensure after selecting, then to set switch speed and mode, press the adjust knob to ensure;



How to set input matrix

Make sure equipment normal operation. Please refer to: How to make equipment normal operation

Operation description:

This function can support 2 or 3 layers to play the same videos, to meet various requirements.

Operation as following:

1.Press

and light up green;

2.LCD shows the MENU, rotate the adjust knob to select Input;

3.Press the adjust knob to ensure, and rotate the adjust knob to select

4. Enter to set Input Matrix;

5.Press the adjust knob to ensure and enter Matrix; Rotate the adjust knob to set these 3 Channel. That can achieve matrix;

How to set DVI3 as background

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

Operation description:

The system default background for test pattern. There are two ways to use background: One is to use own test pattern, anther one is to use DVI3 input signal; It must make sure the input resolution of DVI3 is the same with equipment before set DVI3 as background;

Operation step as following:

1.Press

and light up green;

2.LCD shows MENU mode, press the adjust knob to select Input

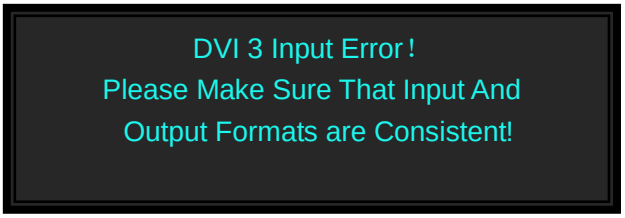
3.Press the adjust knob to ensure to enter it; Rotate the adjust knob to select Matrix;

4.Press to ensure and enter Matrix;Press the adjust knob to select Channel 3 and press to ensure.If DVI3 signal is effective and the output resolution is the same with equipment, LCD will show input success if not will show Error information!

5.System Setup and Operation

How to set DVI3 as background

5.Please make sure that input and output formats are consistent ,if show Input Error;



How to splicing with DVI3

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

Splicing:

VSP1314 also is a seamless switcher. As a switcher use the DVI3 to input signal. The max resolution of switcher is twice of DVI3 input, output interface is DVI1 output and DVI2 output, and preview DVI3 signal via output VGA; There are transverse and vertical splicing; Such as DVI3 input is1920x1080，so can splicing 3840x1080 or 1920x2160.

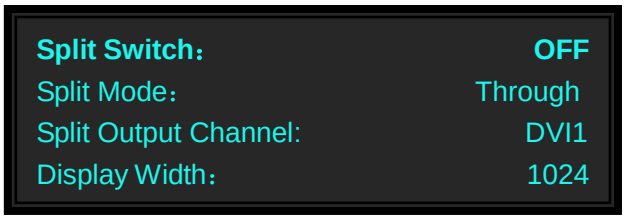
Operation as following:

1.Press

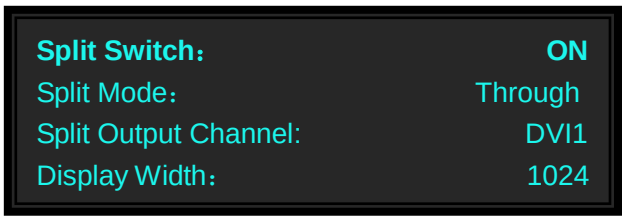
and light up green;

2.LCD shows MENU mode, rotate the adjust knob to select Splicing;

3.Press the adjust knob to ensure and enter it;



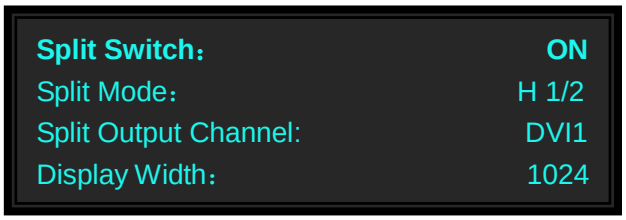
4.Press the adjust knob to select switch, ratote to open it;



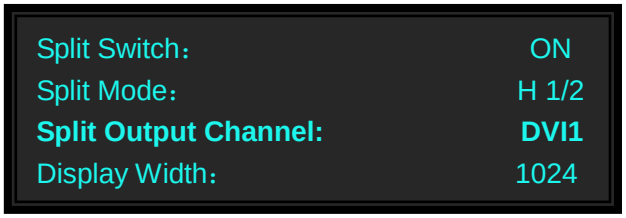
5. Press the adjust knob then rotate it to select Split Mode. Press the adjust knob then rotate it to select Split Mode. There are three kinds of split mode: Through、H1/2、V1/2;

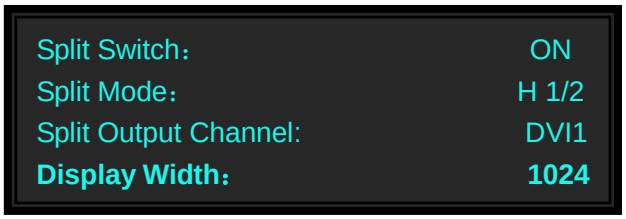
5.System Setup and Operation

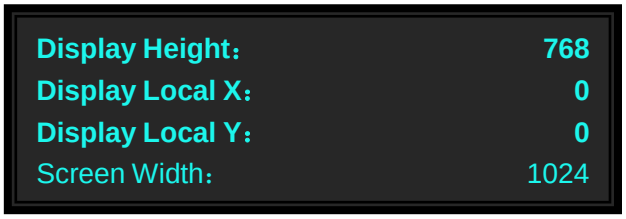
How to splicing with DVI3



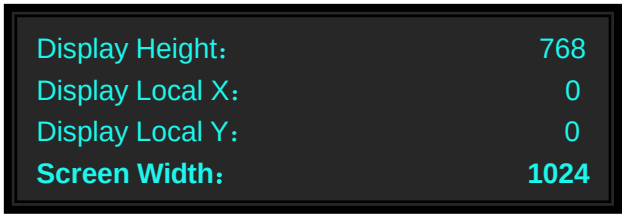
6. Press the adjust knob and rotate it to select Split Output Channel, press to enter it. There are DVI1 and DVI2.Output channel can be set separately;



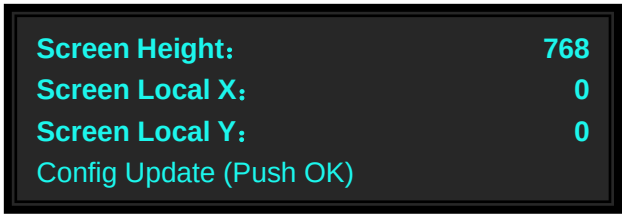




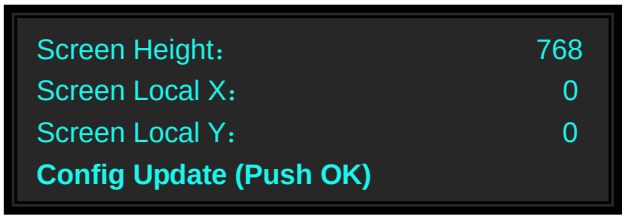
7. Repeat the above operation step, can adjust the display range of DVI3 input source. That is scale a part image of DVI3 and display on output port.



8.Repeat above operation step to adjust the output image.That is adjust the size and position of output image;



9.Parameter correction. If splicing is stagger or there is a flower on screen, because of DVI3 input interrupt or unstable, can correct the parameter.



How to use BLACK

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

BLACK：

Black signal is a special effect which in order to set background directlly in the special scene.

VSP1314 default layer 3 as background. That is button 0 is the background;

Operation step as following:

1.Press

and light up yellow ,at preview can

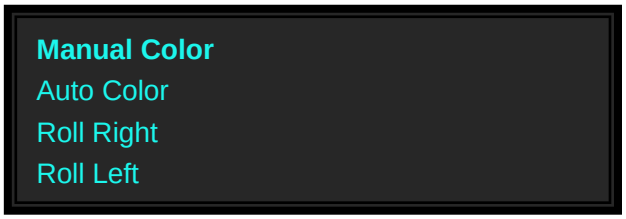
2.check the image;

3.If is not background, please press and light up green.LCD shows the

4.MENU mode, press the

adjust knob to select Test Pattern;

5.Press the adjust knob and enter it, select Manual Color;



6.Press the adjust knob and enter it; Press the adjust knob to set Red、Green、Blue as 0,That is set test pattern as background;

How to use Test Pattern

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

Test Pattern:

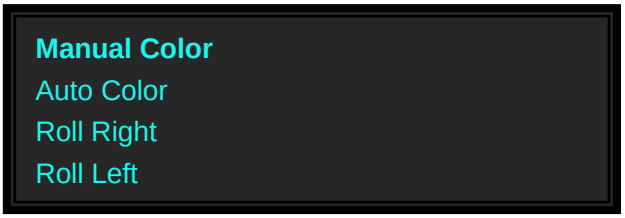
If there is no signal source from outside, the equipment have own test pattern, like as a video generator, can meet different scene;

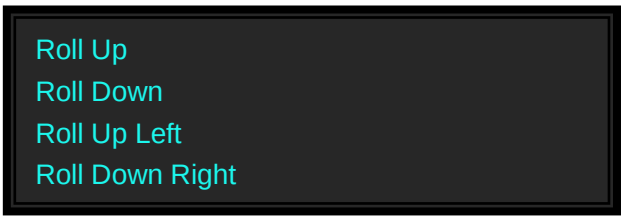
Operation step as following:

1.If is not background please press

and light up green, rotate the adjust knob to select Test Pattern;

2.Press the adjust knob to ensure and enter it to select the menu of Test Pattern;





3.User can select mode arbitrarily then press to ensure;

How to save parameter

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

User save user can load different scene directly

There are 10 group of save;

Operation step as following:

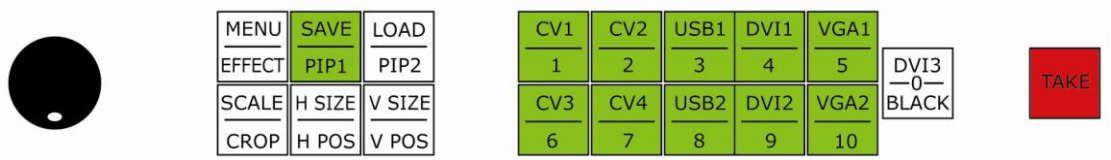
1.Press

and light up green;

2.Button1，2，3，4，5，6，7，8，9，10 light up green at the same time;

3.Select the position of save, press the button and LCD shows SAVING;

Picture1：save mode



How to load parameter

Make sure equipment normal operation. Detail please refer to :How to make equipment normal operation

User can load saving directly. There are 10 groups of load;

Operation step as following:

1.Press

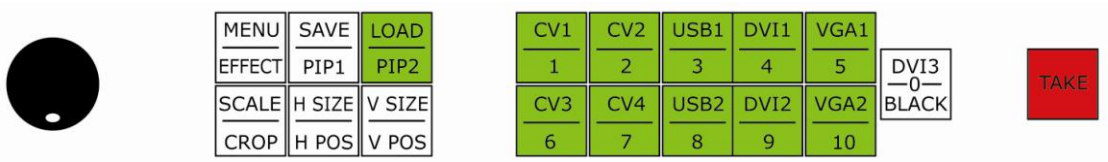
and light up green;

2.Button1，2，3，4，5，6，7，8，9，10 light up red at the same time;

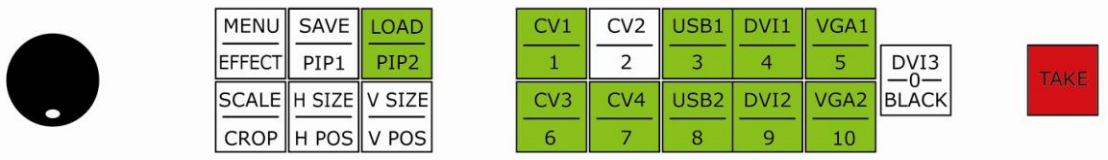
3.Select the position of load, press that button and button light off;

4.Can load circularly;

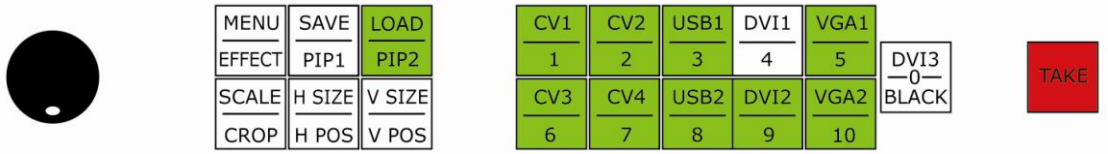
Picture 1:Load mode



Picture 2:Load 2 mode



Picture 3:Load 4 circularly mode



A.Specification

CVBS Input	
Number of inputs	4
Connector	Standard BNC Socket
Supported Standard	PAL/NTSC
Signal	1Vpp±3db (0.7V Video+0.3v Sync) 75 ohm
Supported Resolution	480i,576i
VGA Input	
Number of inputs	2
Connector	Standard DB9 Socket
Supported Standard	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level：300mV Sync-tip：0V
Supported Resolution	VGA-UXGA (800*600@60, 1024*768@60, 1280*1024@60, 1440*900@60,1600*1200@60)
YPbPr Input	
Number of inputs	2
Connector	Standard DB9 Socket
Supported Standard	HD analog input
Signal Level	Y:1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm Pb/Pr:0.7Vpp±3dB 75 ohm
Supported Resolution	480i,576i,480p,576p,720p50,720p60,1080i50,1080p50 1080i60,1080p60
DVI Input	
Number of inputs	2
Connector	Standard DVI-I Socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50,1080P59.94/60,1080i50,1080i59.94/60, 720p50,720p59.94/60 VESA：800×600×60Hz，1024×768×60Hz，1280×768×60Hz，1280×1024×60Hz，1600×1200×60Hz，1920×1080×60Hz
Signal Level	TMDS pwl，single pixel input，165MHz bandwidth
Standard	HDMI 1.3
Signal Level	TMDS pwl， 165MHz bandwidth
Background Input	
Number of inputs	1

Connector	Standard DVI-I Socket
Supported Resolution	VESA：800×600×60Hz，1024×768×60Hz，1280×768×60Hz，1280×1024×60Hz，1600×1200×60Hz，1920×1080×60Hz
Signal Level	TMDS pwl，single pixel input，165MHz bandwidth
Standard	DVI 1.0
Signal Level	TMDS pwl， 165MHz bandwidth
USB Output	
Number of inputs	2
Connector	Standard USB Interface
Supported Standard	Picture format：JPGE,BMP,PGN Video format：MPEG2,MPEG3, MPEG4,H264, RM,RMVB,MOV, MJPEG, VC1,DivX,FLV
VGA Output	
Number of inputs	1
Connector	Standard DVI-I Socket
Supported Resolution	VESA: 1024×768×60Hz， 1280×768×60Hz，1280×720×60Hz，1280×1024×60Hz，1366×768×60Hz,1400×1050×60Hz，1440×900×60Hz，1440×900×60_r Hz，1600×1200×60Hz, 1680×1050×60Hz，1920×1080×60Hz.
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level：300mV Sync-tip：0V
DVI Output	
Number of inputs	2
Connector	Standard DVI-I Socket
Signal Level	TMDS pwl， 165MHz bandwidth
Supported Resolution	VESA: 1024×768×60Hz， 1280×768×60Hz，1280×720×60Hz，1280×1024×60Hz，1366×768×60Hz， 1400×1050×60Hz, 1440×900×60Hz，1440×900×60_r Hz，1600×1200×60Hz，1680×1050×60Hz，1920×1080×60Hz.1920x1200_60 Hz.
Function illustration	
Input channel allocation button	Support programming configuration of every input channel signal
Dural-screen	Support background image overlay
Switch	Support arbitrary channel switch with fade-in and fade-out
Accessories products and services	
Setting control	RS232 USB TCP/IP
Power	85-264V 2.1A IEC-3 power port
Working environment	0°C~45°C
Store environment	10% to 90%
Product quality assurence	One year quality assurance with limited

B.Contact Information

Warranty：

All video products are designed and tested to the highest quality standard and backed by a full 3-year parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

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  - ～ http://www.rgblink.cn
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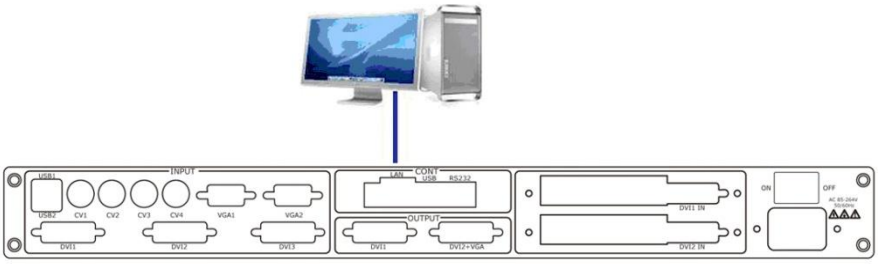
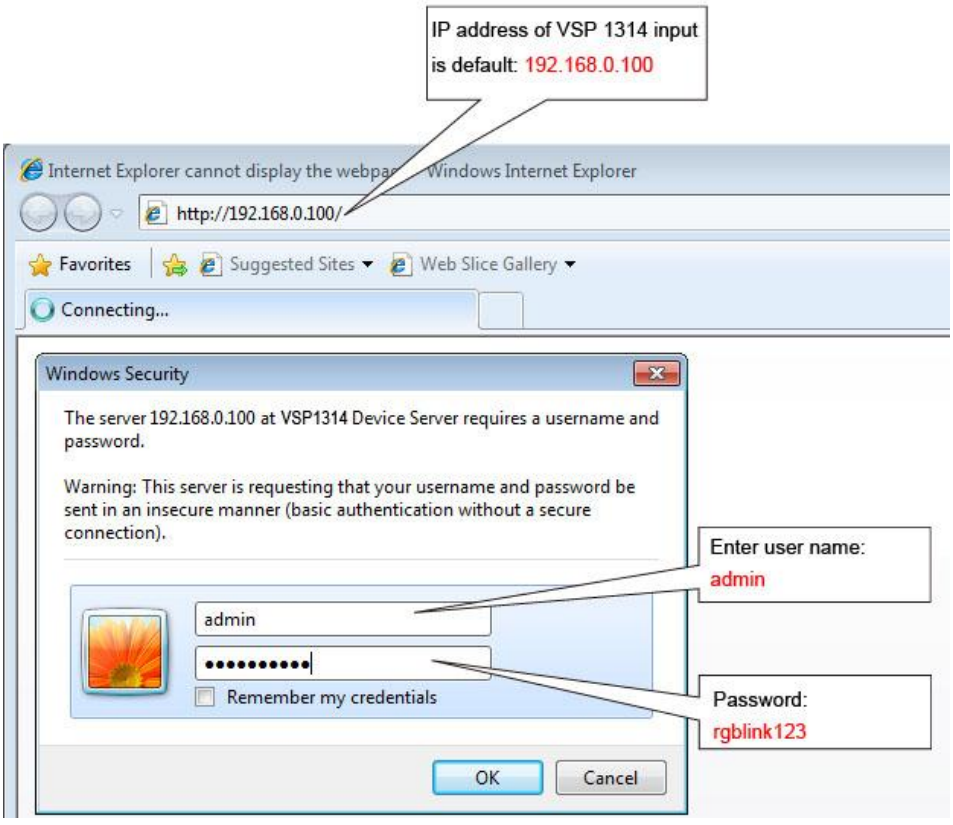
C.Firmware Upgrade

Function Firmware Upgrade

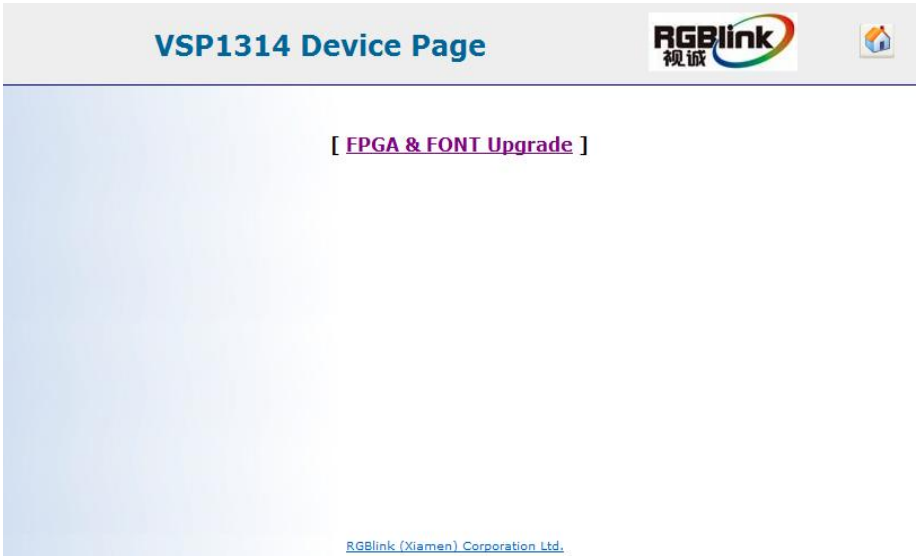
1. Firstly, connect device and computer with reticle; input network address of VSP 1314 firmware upgrade in the address bar: 192.168.0.100;



2. Input your user name admin in the popup dialog box, rgblink: 123 password.



3. Thirdly, click FPGA&FONT Upgrade to enter upgrade page;



4.press【browse…】choose upgrade document, the name of document must be: xxx.bin or xxx.fon；

VSP1314 Device Page
Upgrade FPGA & FONT
You can select files from your local PC and upload them to FPGA Or Font. Files will upgrade FPGA
Select a File to upgrade FPGA or Font
C:\Users\Administrator\Desktop\VSP1314_临时程序\2012
浏览...
Update
Attention:
Upgrade FPGA & Font: file name is "xxx.bin" or "xxx.fon"
RGBlink (Xiamen) Corporation Ltd.

5. Click【Update】 to send, and wait for upgrading; User can check the program loading process、rewrite time and whether is success on equipment, or can check on the network page;

VSP1314 Device Page
RGBlink
视诚
Upgrade FPGA & FONT
You can select files from your local PC and upload them to FPGA Or Font. Files will upgrade FPGA
Select a File to upgrade FPGA or Font
浏览...
Update
Upgrade Font Success!
Attention:
Upgrade FPGA & Font: file name is "xxx.bin" or "xxx.fon"
RGBlink (Xiamen) Corporation Ltd.

6. It will show: Upgrade Font Success after finish. And restart the equipment to check whether operation is normal.

Image Firmware Upgrade

All the two USB interface must be upgraded. Because it can improve the image quality, the upgrade etepsare as following:

1、Input USB enter to USB interface.

2、After start equipment enter to the menu, and find the menu of（Video fireware Updata），can select USB1 and USB2.

3、Select the corresponding USB interface to upgrade, LCD display “firmware upgrade please wait”

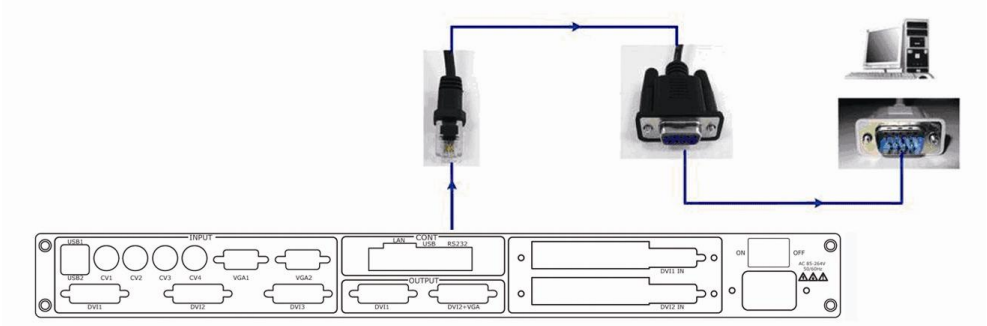
4、“(Update Main Board Update Success) ”it means update success, now you can upgrade other USB interface to upgrade, the steps the same as above.

5、Restart equipment to check operation.

Communication Firmware Upgrade

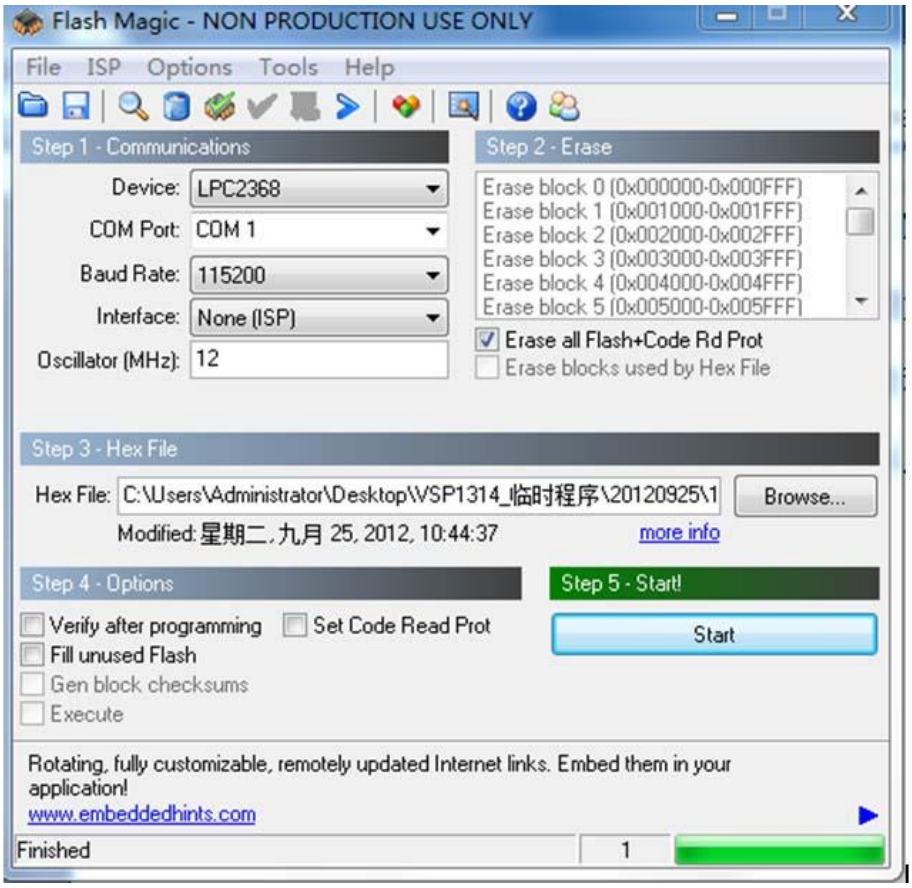
Shut the power device, switch the direction of arrow of the two dial switch which download IP board to ON state. As shown in figure:

Connect one end of RJ11 download line to RS232 .control Connector of video processor end access and the other end access PC serial port.



Double-click Flash Magic, enter into the procedure Connector of Flash Magic, setting in figure: First, users select the corresponding serial ports, set baud rate as 115200, choosing device LPC2368 and loading target file of 100 M IP board of the upgrade program. (hex. File) Then, confirm it through choosing two

Finally, click －start‖ button.



When download is finish, quit, shut the power equipment, reset two dial code reset (as shown in figure), restart the power equipment, check whether the equipment operate or not.

Note

Flash Magic software download website: http://www.flashmagictool.com/download.html&d=FlashMagic.exe